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seq_documentation_block:
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AAV30579;
 07-DEC-1998 (first entry)
 Clostridium botulinum type B toxin gene from Danish strain.
 Antitoxin: vaccine; neurotoxin; toxin B; intoxication; immunogen;
 botulinism; BoTB; ds.
 Clostridium botulinum serotype B Danish strain.
 MO9808540-A1.
 05-MAR-1998.
 28-AUG-1997; 97MO-US15394.
 28-AUG-1996; 96US-0704159.

(OPHI-) OPHIDIAN PHARM INC.
 Thalley BS, Williams JA;
 WPI: 1998-230234/20.
 P-PSDB: AAW68392.
 Host cell containing recombinant expression vector encoding
 Clostridium botulinum type B or E toxin - useful to treat humans
 and other animals at risk of intoxication with clostridial toxin.
 Example 35; Page 291-296; 428pp; English.

This is the coding region of the Clostridium botulinum serotype B
 (Danish strain) toxin gene that codes for a 1291-amino acid
 polypeptide (see AAW68392). The C fragment (see AAW68394) of the
 B toxin has been expressed as histidine-tagged protein in Escherichia
 coli host cells. The invention relates to C. botulinum recombinant
 toxin polypeptides. Methods are provided which allow for the
 isolation of soluble recombinant proteins free of significant
 endotoxin contamination. Preferred hosts for production of the
 recombinant proteins are E. coli, insect cells and yeast cells.
 The recombinant proteins are used as immunogens for the production
 of vaccines and antitoxins that are useful in the treatment of
 humans and animals at risk of intoxication with clostridial toxin.

Sequence 3876 BP; 1612 A; 370 C; 617 G; 1277 T; 0 other;

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Tue Sep 3 14:28:26 2002

us-09-910-186

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SEQ ID 7

Page 1

186a-7.rge

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ALIGNMENTS

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 ACCESSION M81186.1 GI:144734
 VERSION botB gene; neurotoxin type B.
 KEYWORDS Clostridium botulinum DNA.
 SOURCE Clostridium botulinum
 ORGANISM Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae; Clostridium.
 REFERENCE 1 (bases 1 to 4041)
 AUTHORS Whelan, S.M., Elmore, M.J., Bodsworth, N.J., Brehm, J.K., Atkinson, T. and Minton, N.P.
 TITLE Complete nucleotide sequence of the Clostridium botulinum gene encoding the type B neurotoxin
 JOURNAL Unpublished (1991)
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REFERENCE	Kirma, N., Ferreira, J. L. and Baumstark, B. R.
AUTHORS	
TITLE	Characterization of six type A strains of <i>Clostridium botulinum</i>

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ACCESSION  M81186
VERSION    M81186.1 GI:144734
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SOURCE     Clostridium botulinum DNA.
ORGANISM   Clostridium botulinum
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REFERENCE  1 (bases 1 to 4041)
AUTHORS    Whelan, S.M., Elmore, M.J., Bodsworth, N.J., Brehm, J.K., Atkinson, T.
            and Minton, N.P.
TITLE      Complete nucleotide sequence of the Clostridium botulinum gene
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            Unpublished (1991)
  
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ACCESSION  AF295926
VERSION    AF295926.1  GI:15419707
KEYWORDS
SOURCE
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            Clostridium.
REFERENCE  1 (bases 1 to 3876)
AUTHORS   Kirma,N., Ferreira,J.L. and Baumstark,B.R.
TITLE      Characterization of six type A strains of Clostridium botulinum
            that contain type B toxin gene sequences
            Unpublished
JOURNAL
REFERENCE  2 (bases 1 to 3876)
AUTHORS   Kirma,N., Ferreira,J.L. and Baumstark,B.R.
TITLE      Direct Submission
JOURNAL
SUBMITTED (14-AUG-2000) Department of Biology, Georgia State
University, P.O. Box 4010, Atlanta, GA 30302-4010, USA
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seq documentation_block:

AAV30579 standard; DNA; 3876 BP.

AAV30579;

07-DEC-1998 (first entry)
 Clostridium botulinum type B toxin gene from Danish strain.
 Anti-toxin; vaccine; neurotoxin; toxin B; intoxication; immunogen;
 Botulism; BoB; ds.
 Clostridium botulinum serotype B Danish strain.

MO9808540-A1

05-MAR-1998.

28-AUG-1997; 97MO-US15394.
 28-AUG-1996; 96US-0704159.

(OPHI-) OPHIDIAN PHARM INC.
 Thalley BS, Williams JA.
 MPI: 1998-230234/20.
 P-PSDB; AAW68392.

Host cell containing recombinant expression vector encoding
 Clostridium botulinum type B or E toxin - useful to treat humans
 and other animals at risk of intoxication with clostridial toxin
 Example 35; Page 291-296; 428pp; English.

This is the coding region of the Clostridium botulinum serotype B
 (Danish strain) toxin gene that codes for a 1291-amino acid
 polypeptide (see AAW68392). The C fragment (see AAW68394) of the
 B toxin has been expressed as histidine-tagged protein in Escherichia
 coli host cells. The invention relates to C. botulinum recombinant
 toxin polypeptides. Methods are provided which allow for the
 isolation of soluble recombinant proteins free of significant
 endotoxin contamination. Preferred hosts for production of the
 recombinant proteins are E. coli, insect cells and yeast cells.
 The recombinant proteins are used as immunogens for the production
 of vaccines and antitoxins that are useful in the treatment of
 humans and animals at risk of intoxication with clostridial toxin.

Sequence 3876 BP; 1612 A; 370 C; 617 G; 1277 T; 0 other;

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Length: 440

Ratio: 5.336

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Percent Similarity: 99.545

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 2854 ATATATTAATTTGATGAATAATATATTCGGCGTGAATAATATCATTTAGGG 2903
 117 yAsnArgIleIleTyrPheLeuIleAspIleAsnGlyLysTyrLysSerV 134
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Tue Sep 3 14:28:26 2002

us-09-910-186

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ALIGNMENTS

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LOCUS Clostridium botulinum neurotoxin type B (botB) gene, complete cds.
DEFINITION M81186
ACCESSION M81186.1 GI:144734
VERSION botB gene; neurotoxin type B.
KEYWORDS Clostridium botulinum DNA.
SOURCE Clostridium botulinum
ORGANISM Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae; Clostridium.
REFERENCE 1 (bases 1 to 4041)
AUTHORS Whelan, S.M., Elmore, M.J., Bodsworth, N.J., Brehm, J.K., Atkinson, T. and Minton, N.P.
TITLE Complete nucleotide sequence of the Clostridium botulinum gene encoding the type B neurotoxin
JOURNAL Unpublished (1991)
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BASE COUNT 1679 a 383 c 645 g 1334 t
ORIGIN

BASE COUNT	ORIGIN
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Matches 963; Conservative	0.	Microbial		

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DEFINITION	AF295926	3876 bp DNA
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REFERENCE		
AUTHORS		
TITLE		

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 DEFINITION Clostridium botulinum neurotoxin type B (botB) gene, complete cds.
 ACCESSION M81186
 VERSION M81186.1 GI:144734
 KEYWORDS botB gene; neurotoxin type B.
 SOURCE Clostridium botulinum DNA.
 ORGANISM Clostridium botulinum
 Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae;
 Clostridium.

REFERENCE 1 (bases 1 to 4041)
 AUTHORS Whelan, S.M., Elmore, M.J., Bodsworth, N.J., Brehm, J.K., Atkinson, T.
 and Minton, N.P.

TITLE Complete nucleotide sequence of the Clostridium botulinum gene
 encoding the type B neurotoxin
 JOURNAL Unpublished (1991)

FEATURES
 source Location/Qualifiers
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BASE COUNT 1679 a 383 c 645 g 1334 t
 ORIGIN

alignment_scores:
 Quality: 2340.00 Length: 440
 Ratio: 5.330 Gaps: 0
 Percent Similarity: 99.773 Percent Identity: 99.545

alignment_block:
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Align seg 1/1 to: CLOBOTB from: 1 to: 4041

True

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seq documentation block:
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DEFINITION     Clostridium botulinum neurotoxin type B gene, complete cds.
ACCESSION      AF295926
VERSION        AF295926.1   GI:15419707
KEYWORDS
SOURCE
ORGANISM       Clostridium botulinum.
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                Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae;
                Clostridium.
REFERENCE      1 (bases 1 to 3876)
AUTHORS       Kirma,N., Ferreira,J.L. and Baumstark,B.R.
TITLE         Characterization of six type A strains of Clostridium botulinum
               that contain type B toxin gene sequences
JOURNAL        Unpublished
REFERENCE      2 (bases 1 to 3876)
AUTHORS       Kirma,N., Ferreira,J.L. and Baumstark,B.R.
TITLE         Direct Submission
JOURNAL        Submitted (14-AUG-2000) Department of Biology, Georgia State
               University, P.O. Box 4010, Atlanta, GA 30302-4010, USA
FEATURES
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